IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

INTELLECTUAL VENTURES I LLC and INTELLECTUAL VENTURES II LLC,	)	
Plaintiffs,	)	**C.A. No. 4:24-cv-00980-ALM**
v.	)	
	)	**JURY TRIAL DEMANDED**
AMERICAN AIRLINES, INC.	)	
Defendant.	)	

PLAINTIFFS' OPENING CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

Plaintiffs Intellectual Ventures I LLC and Intellectual Ventures II LLC (collectively, "IV") submit this brief in support of its constructions for the disputed claim terms of the Asserted Patents, as identified below:

U.S. Patent No.	Exhibit No.	Disputed Terms and Claims
8,332,844 ("'844 Patent")	A	1. "root image" (claim 7)
8,407,722 ("'722 Patent")	B	1. "input source" (claim 14) 2. "identify a category of the update message based on the input source" (claim 14)
7,949,785 ("'785 Patent")	C	1. "network address" (claim 30) 2. "network route director" (claim 30)
7,324,469 ("'469 Patent")	D	1. "a remote location experiencing a relatively high volume of transient traffic" (claim 24) 2. "a relatively high volume of transient traffic" (claim 24)
7,257,582 ("'582 Patent")	E	1. "partition" (claim 1) 2. "description of all said partitions" (claim 1) 3. "simultaneously executing at least a respective one of the subtasks of the computer-executable process in each of at least some of said processors on a respective one of the partitions" (claim 1) 4. "on a first-come/first-served basis" (claim 1)

The Asserted Patents include U.S. Patent Nos. 7,257,582; 7,324,469; 7,712,080; 7,721,282; 7,822,841; 7,949,785; 8,027,326; 8,332,844; 8,352,584; 8,407,722; 10,103,845; and 11,032,000 ("Asserted Patents"). IV provided claim construction disclosures for all Asserted Patents pursuant to P.R. 4-1, 4-2, and 4-3. *See* Exs. F, G; Dkt. 67-1. For this brief, only claim terms for 5 of 12 of the Asserted Patents are in dispute, as shown in the table above.

For the reasons below, the Court should adopt each of IV's proposed constructions, which are properly grounded in the intrinsic record and, where appropriate, provide helpful clarity to a

person of ordinary skill in the art ("POSITA"). In contrast, Defendant American Airlines, Inc. ("AA") propounds constructions that improperly read limitations into the claims from the specification, are based on misinterpreting the patent's prosecution histories, or are otherwise unsupported by evidence.

II. LEGAL STANDARDS

It is a "bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.,* 415 F.3d 1303, 1312-19 (Fed. Cir. 2005) (quotations omitted). "[T]he words of a claim are generally given their ordinary and customary meaning[,]" *i.e.,* "the meaning that the term would have to a [POSITA] in question at the time of the invention." *Id.* at 1312-13 (quotations omitted). "There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Thorner v. Sony Computer Entm't Am. LLC,* 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citation omitted). The standards for finding lexicography or disavowal are "exacting." *GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014). Moreover, it is "not enough that the only embodiments, or all of the embodiments, contain a particular limitation. We do not read limitations from the specification into claims; we do not redefine words …. To constitute disclaimer, there must be a clear and unmistakable disclaimer." *Id*. Absent a clear and unmistakable disclaimer, it is improper to "interpret claim terms in a way that excludes embodiments disclosed in the specification." *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1276 (Fed. Cir. 2008).

"[T]he best source for understanding a technical term is the specification from which it arose, informed, as needed, by the prosecution history." *Phillips*, 415 F.3d at 1315 (citation omitted). Because prosecution reflects an "ongoing negotiation … rather than the final product of

that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id*. at 1317. "In construing claims, our analysis must begin and remain centered on the claim language itself." *Novartis Pharms. Corp. v. Abbott Lab'ys*, 375 F.3d 1328, 1334 (Fed. Cir. 2004).

Courts may also "rely on extrinsic evidence, which consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317 (quotation omitted). But "while extrinsic evidence can shed useful light on the relevant art, … it is less significant than the intrinsic record in determining the legally operative meaning of claim language." *Id*. (quotation marks omitted).

A "patent claim is indefinite if, when read in light of the specification delineating the patent, and the prosecution history, the claim fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention …. Reasonable certainty does not require absolute or mathematical precision." *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017) (internal quotations and citations omitted). A defendant carries "the burden of proving indefiniteness by clear and convincing evidence." *Id*. "Claim language employing terms of degree has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014).

III. '844 PATENT

A. '844 Patent Background

U.S. Patent No. 8,332,844 ("'844 Patent") is titled "Root Image Caching and Indexing for Block-Level Distributed Application Management" and was filed as Application No. 11/709,477 on February 21, 2007.

The ’844 Patent discloses storing data blocks of a root image on a first storage unit and storing data blocks of leaf images on a second storage unit, where the leaf image includes additional data blocks that are not contained in the root image, including changes made to the blocks of the root image. Ex. A (’844 Patent) at Abstract. If blocks are unchanged, then they are not stored on the leaf image. *Id*. at 11:35-38. Blocks of a root image that are accessed by one or more compute nodes may be cached, such that subsequent attempts to access the blocks by the same compute node (or other nodes) result in significant speed improvements. *Id*. at 6:38-49. A method for generally implementing a system as described is disclosed in Figure 3A, reproduced below. As shown, blocks of a root image are stored in a first storage unit at step **310** and blocks that are, e.g., changed or are new, are part of a leaf image that is stored in a second storage unit at step **320**. *Id*. at 7:58-67. To the extent blocks are accessed, they are stored in cache at step **322**, where they can be retrieved on subsequent access attempts for example at steps **324**, **326**, and **328**. *Id*. at 8:1-12.

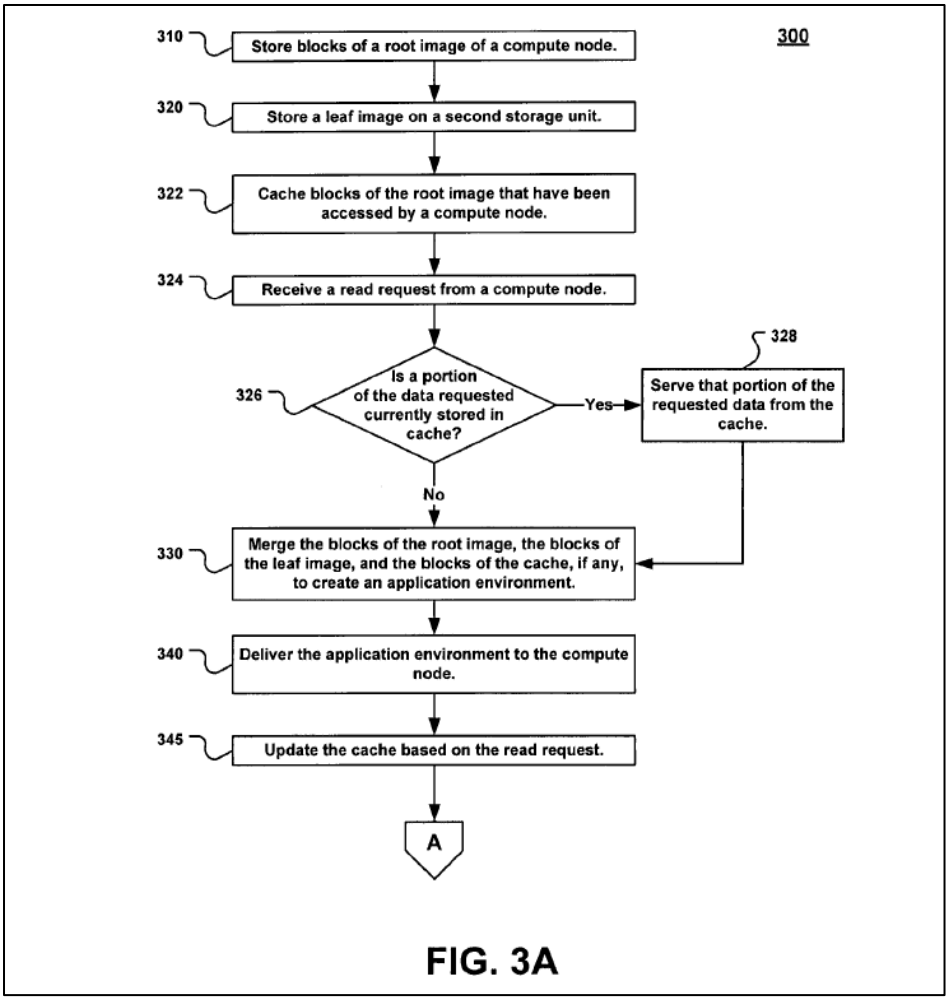


FIG. 3A

B. Disputed Claim Terms

The parties only dispute the meaning of "root image," and in particular dispute the portion of AA's proposed construction that reads "operating beneath the file system." For the reasons below, AA's proposed construction should be rejected.

1. "root image" ('844 Patent, Claims 7, 11)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary	a read-only base set of data blocks, operating beneath the file system, that provide the common portion of the application environment

AA's proposed construction is wrong for multiple reasons, including (1) it incorrectly relies on partial lexicography that does not apply here; and (2) it imports limitations into the claims from embodiments.

A claim construction analysis must begin and remain centered on the claim language itself, for that is the language the patentee has chosen to "particularly point[ ] out and distinctly claim[ ] the subject matter which the patentee regards as his invention." *Interactive Gift Exp., Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (quoting 35 U.S.C. § 112 ¶ 2). Claim 7 recites, in part, "*storing blocks of a root image* of said compute nodes on a first storage unit" and "storing leaf images" that "*includ[e]* only additional data blocks not previously contained in said root image and *changes made by respective compute nodes to the blocks of the root image*." Ex. A ('844 Patent) at 11:29-30 (emphasis added). Thus, per the claim language, a root image includes blocks of data, and changes to those blocks are stored in the leaf image.

AA's proposed construction, which introduces multiple additional limitations on the term "root image," should be rejected. In particular, the language "read-only," "operating beneath the file system," and "common portion of the application environment" are attempts to import limitations into the claim language. These additions are not supported by the intrinsic evidence. Starting with AA's "read-only" language, importing the term "read only" would exclude embodiments that are not read-only. For example, Figure 2 shows a system **200** that includes a first storage unit **240** that "store[s] blocks of a root image of an application environment." Ex. A ('844 Patent) at 5:27-28. The specification acknowledges that there are embodiments which are "read only" - "*in embodiments where the first storage unit **240** is read-only*, and explains that for these embodiments, the root image will not have to be re-indexed because the contents of the root

image do not change." *Id*. at 7:34-37. In other words, the specification contemplates that not all embodiments will be a "read-only" root image.

To the extent AA alleges that this portion of its proposed construction is lexicographical based on the disclosure at column 2 lines 14-15, it cannot be because the '844 Patent describes embodiments inconsistent with this alleged definition, as described above. Further, it is not exacting. *See Lionra Technologies Ltd. v. Cisco Systems, Inc.*, No. 2:24-CV-00097-JRG, 2025 WL 1384261, at *3 (E.D. Tex. May 13, 2025) ("To act as his own lexicographer, the patentee must 'clearly set forth a definition of the disputed claim term,' and 'clearly express an intent to define the term.'") (quoting *GE Lighting Sols.*, 750 F.3d at 1309). No such clear definition exists here. *See* Ex. A ('844 Patent) at 7:34-37.

The next limitation in AA's proposed construction, "operating beneath the file system," is not based on any claim language, nor can AA argue as much. Indeed, claim 7 does not recite the language "file system," and it does not recite any layer or level where the root image "operat[es]." The proposed language thus appears to be wholesale incorporated from particular embodiments of the '844 Patent, for example the disclosures at column 7 lines 58-62 and column 5 lines 51-58. The disclosure at column 7 lines 58-62 describes an embodiment shown in Figure 3, and recites step **310** that "involves storing blocks of a root image of the compute node on a first storage unit. By storing data at the block level, *embodiments are able to operate beneath the file system and thus are designed to be file system and operating system independent*." Ex. A ('844 Patent) at 7:58-62 (emphasis added). Notably, this disclosure relates to one embodiment of the '844 Patent and describes that this embodiment is *able* to operate at a layer beneath the file system, not that it must do so. The disclosure at column 5 lines 51-58 suffers from the same issue—it describes a single embodiment where blocks of a file are modified and makes clear that it is an "example" of how

changes to a root image *may* be processed. Further, the '844 Patent describes embodiments that operate at the file system layer. *See, e.g.*, Ex. A ('844 Patent) at 9:39-67. Accordingly, it would be improper to inject this limitation into the claims. *See Phillips*, 415 F.3d at 1323 ("although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments."); *see also Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004) ("As we explained above, it is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.").

The portion of AA's proposed construction that reads "that provide the common portion of the application environment" should be rejected because neither the claims nor the specification recite this language. While the specification recites "common" and "portion" in various parts, it fails to recite those in combination. It is also entirely unclear why AA likely alleges lexicography for parts of its proposed construction (*i.e.*, the portion that recites "a read-only base set of data bricks"), but not other parts. For example, it appears to rely on the disclosure at column 2 lines 14-15 as lexicography for the language in its proposed construction, "a read-only base set of data blocks," but then ignores the subsequent language in that disclosure that reads "of the application environment." In other words, if AA were correct that "root image" should be defined in part on lexicography (which it is not correct), its proposed construction should be "a read-only base set of data blocks of the application environment." AA's Frankenstein approach to claim construction should be thus rejected.

IV. ’722 PATENT

A. ’722 Patent Background

U.S. Patent No. 8,407,722 (“’722 Patent”) is titled “Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network” and was filed as Application No. 11/396,251 on March 30, 2006.

The ’722 Patent discloses transferring information for remotely updating content at client devices through digital networks. Ex. B (’722 Patent) at 1:24-27. A client device receives a live object from an input source, and in response identifies object IDs associated with the object and registers the object IDs with a routing network that is adapted to send update messages to nodes in the network that then forward the messages to the client. *Id*. at Abstract. Messages from an input source are assigned to one or more categories that is tracked by a gateway, such that when a gateway receives update messages from input sources and identifies the one or more categories, it routes the messages to the appropriate client(s). This routing “utilizes bandwidth efficiently because the update messages are provided to the clients only when the live objects change.” *Id*. at 3:18-20.

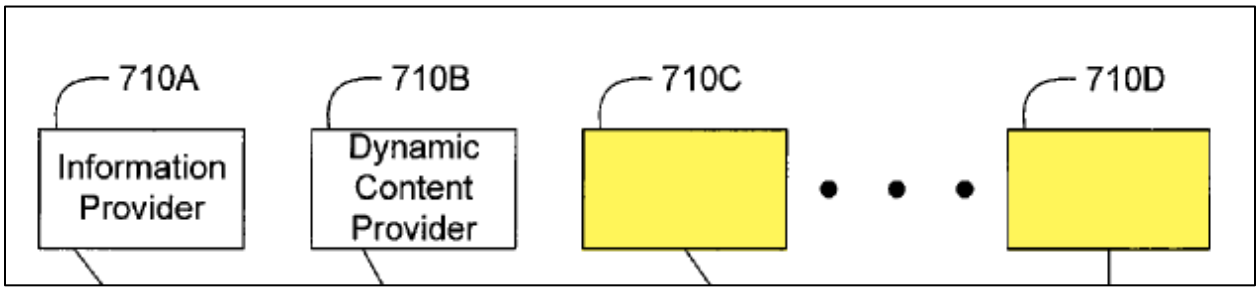
B. Disputed Claim Terms

1. “input source” (’722 Patent, Claim 14)

Plaintiffs’ Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning, no construction necessary	information provider and/or dynamic content provider

The claim term “input source” does not require construction and should be construed to have its ordinary and customary meaning, *i.e.*, a source of input. AA’s proposed construction based on lexicography is wrong because (i) there is no lexicography and (ii) it unnecessarily limits the meaning of “input source” to an embodiment.

Claim 14 recites, in part, "providing, using a processing device of *an input source*, a data representation to a client device … [that] includes at least one live object recognizable by the client device." Ex. B ('722 Patent) at 23:55-59 (emphasis added). Thus, on its face, claim 14 recites an "input source" that provides a "data representation" that includes a "live object" to a "client device." While the '722 Patent specification provides *examples* of an input source including an "information provider" and a "dynamic content provider," it does not limit an "input source" to those examples. For example, the specification "*generically refer[s]*" to an "information provider" or a "dynamic content provider" as an "input source," but it does not define an input source as such. *Id*. at 3:15-18 (emphasis added). Further, Figure 7 describes various "input sources **710**" that are involved in sending messages to clusters, including an information provider **710A**, dynamic content provider **710B**, and *undefined* input sources **710C** and **710D**.



Id. at Figure 7 (annotations added). While an input source *can* be an information provider or a dynamic content provider, the specification describes other potential sources of input. *See Oatey Co.*, 514 F.3d at 1276 ("We do not read limitations from the specification into claims; we do not redefine words").

2. "identify a category of the update message based on the input source" ('722 Patent, Claim 14)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary	"identify a category of the update message based on the information provider or dynamic content provider but not on the category/topic of the message content"

For this claim term, the parties dispute whether this term should be interpreted to include the language "but not on the category/topic of the message content." Because AA's proposed construction is improperly based on disclaimer, it should be rejected.

The '722 Patent specification describes many ways of identifying a category of an update message. Indeed, it expressly tells us so: "[t]here are multiple ways to assign the messages into categories." Ex. B ('722 Patent) at 18:52-53; *see also id.* at 19:6-8 ("In one embodiment, the gateway 724 uses a combination of multiple techniques to determine the message categories, node types, and/or mappings."). Examples of those methods include the following:

- "One way is to assign all messages from a given input source 710 into a certain category." *Id*. at 18:53-54.
- "Another way is to explicitly specify the category in the object ID for the message." *Id*. at 18:54-55.
- "Yet another way is to utilize a hashing function or lookup table to partition messages into categories based on object IDs or other values. For example, in one embodiment a hash function is applied to the object ID to generate an integer between 1 and N, and this integer is the message category." *Id*. at 55-58.
- "For example, *a lookup table can be used to encode a priori knowledge about categories, types, and/or mappings and a hash table can be used to route messages for which there is no a priori knowledge*. Continuing this example, assume that certain messages are assigned to a given category based on a table lookup, while other messages are assigned to categories based on a hashing function. In this example, the gateway 724 looks up the object ID (or other information, such as an input source ID) of an arriving message in a lookup table to determine if it has a specified category. If the object ID is stored in the lookup table, the gateway 724 determines the mappings for the category and routes the messages to the nodes of the

> appropriate types. If the objectID is not stored in the lookup table, the gateway 724 utilizes a hash function on the objectID (or other information) to determine the message category." *Id*. at 19:8-23 (emphasis added).

There is thus no dispute that the '722 Patent specification describes multiple ways of identifying a category of an update message. The term in dispute merely requires that the identification of a category of the update message be done *based on* the input source. The recited identification can be based on other information as well, and the claim language does not limit such identification.

AA's proposed construction is wrong because it improperly misconstrues the claim and adds alleged disclaimer that does not satisfy the exacting standard for doing so. Specifically, AA relies on the following passage from the '722 Patent to support its proposed language:

> The Examiner, for example, on page 3 of the Office Action, relies on the above sections of Chandra to allegedly show "identifying each category based on the category/topic of the message content." By this statement, the Examiner appears to agree that Chandra teaches identifying categories **based on category/topic of the message content**. In contrast, claims 26, 33, 39, 45, 51, and 57 recite, *inter* alia,

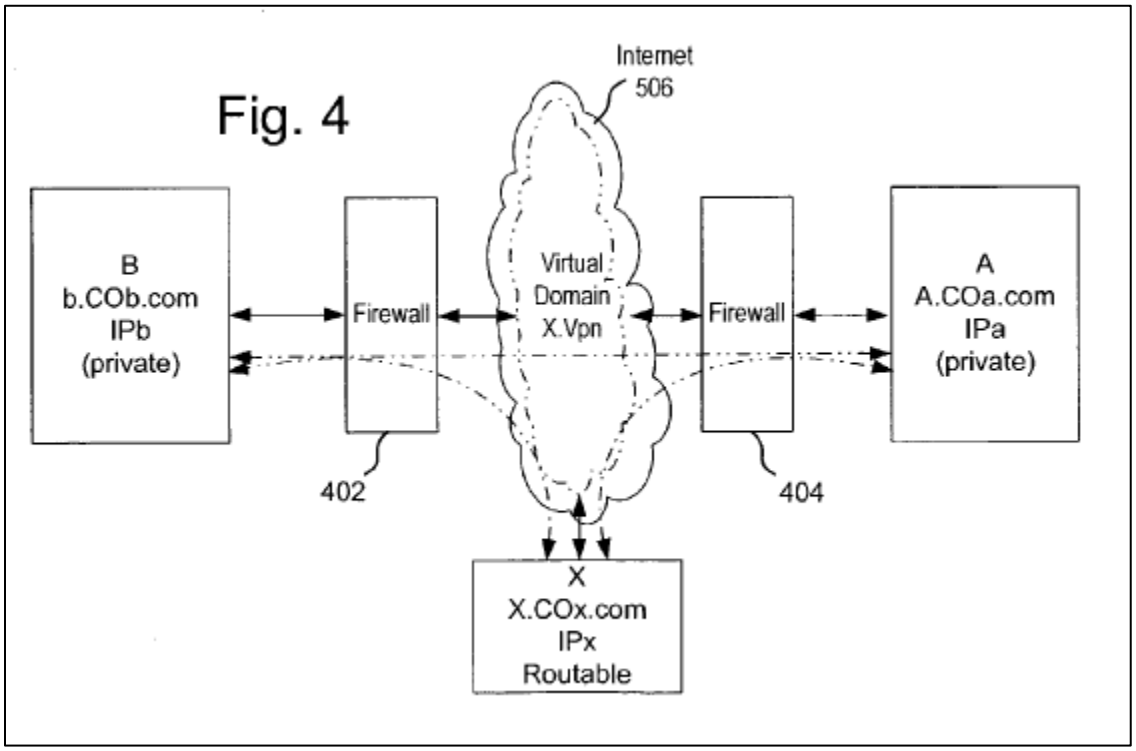
Ex. H ('722 Patent Prosecution History, Applicant Response Dated February 9, 2012) at 18. In this statement, the Applicant merely notes that the prior art fails to disclose the pending claim language "identify a category of the update message based on the input source" because it identifies categories "based on category/topic of the message content." Claim 14 does not preclude identification of a category based on a category or topic of message content, as long as the identification is also "based on the input source."

V. ’785 PATENT

A. ’785 Patent Background

U.S. Patent No. 7,949,785 (“’785 Patent”) was filed on March 31, 2003 as Application No. 10/403,818 and is titled “Secure Virtual Community Network System.”

The ’785 Patent discloses private virtual dynamic networks and enabling communications within such networks. Ex. C (’785 Patent) at Abstract. The ’785 Patent provides a “basic overview” in Figure 4, reproduced below, which shows a Virtual Community Network (VCN) that allows devices, such as devices A, B, and X, to communicate as if they were on the same physical local network.



As shown in Figure 4, devices A, B, and X may direct connections to each other through an application IP interface (“IPa,” “IPb,” and “IPx”) within a virtual domain, where “dashed lines represent direct communication paths seen to applications running on A, B and X.” *Id*. at 9:36-41. Devices A and B may have dynamic or static private network addresses, and device X may be

coupled directly to the Internet and may have a public network address. *Id*. at 9:15-17).

B. Disputed Claim Terms

1. "network address" ('785 Patent, Claims 30, 37)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary	Internet protocol or IP address

The parties sole dispute for this term is whether a "network address" is necessarily an IP address. There does not appear to be a dispute that there are other "network addresses" that are not an internet protocol or IP address. Thus, the sole issue is whether or not there is a clear and unmistakable disclaimer that would serve to limit it in such a way. The term "network address" and Internet Protocol or IP address are not identical in meaning, and the '785 Patent does not define a network address to mean an IP address. Accordingly, AA's proposed construction should be rejected.

In the '785 Patent specification, the language "network address" only appears in the claims. The language "network addresses" is recited in two locations, at 1:57-59 and 10:45-48. Neither recitation is definitional, and neither instance expressly refers to an "Internet protocol or IP address," let alone defines a network address to mean an IP address. *See* Ex. C ('785 Patent) at 1:57-59, 10:45-48; *see also RightQuestion, LLC v. Samsung Elecs. Co., Ltd.*, No. 2:21-CV-00238-JRG, 2022 WL 1154611, at *5 (E.D. Tex. Apr. 18, 2022) ("Short of clear and unambiguous lexicography, which the Court does not find here, the applicant's intent about the meaning of the term is not relevant to its plain and ordinary meaning.").

AA's proposed construction is problematic because it defines "network address" to mean one thing in one instance, but mean other things in other instances. Claim 30, reproduced below,

recites "network address" in one instance, and recites different types of "network address[es]" in other instances, as annotated below.

> 30. A virtual network manager, comprising:
>
> a network interface configured for data communication via a virtual network that is defined by a domain name having *an associated public network address*;
>
> a memory and a processor to implement a register module configured to register devices in a virtual network, the register module further configured to:
>
> receive a registration request from an agent associated with a device;
>
> distribute *a virtual network address* to the device when the device is registered in the virtual network, the device being identified to other devices in the virtual network by *the virtual network address*; and
>
> a DNS server for the virtual network, the DNS server configured to receive a DNS request from a first device in the virtual network, and return *a network address* associated with a network route director, *a private network address* associated with a second device in the virtual network, and *a virtual network address* associated with the second device.

Ex. C ('785 Patent) at 36:37-56 (emphasis added). AA's proposed construction only addresses the single instance of "a network address associated with a network route director." On its face, American's proposed construction is problematic because it proposes to construe "network address" for one instance, but ignores the other instances where a type of "network address" is recited elsewhere in claim 30. American's proposal leads to construing the same term in different ways without a compelling reason to do so, and is thus wrong for this reason alone. *See Fin Control Sys. Pty, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1318 (Fed. Cir. 2001) ("[U]nless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.").

While extrinsic evidence is not necessary to construe this term, AA's extrinsic evidence confirms why its proposed construction is wrong. Specifically, AA relies on a dictionary entry for "network address" from computer-dictionary-online.org that reads "[t]he network *portion* of an IP

address."[1] AA's own extrinsic evidence indicates that a "network address" is a "portion" of an IP address, and not an IP address itself. Thus, AA's contradictory evidence confirms IV's plain and ordinary interpretation should be adopted.

2. "network route director" ('785 Patent, Claim 30)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary	a publicly addressable device configured to route encapsulated packets to and from entities located in a private network portion of a virtual network

The parties dispute whether the term "network route director" should import additional limitations not present in the claim language.

Claim 30 recites in part a DNS server for the recited virtual network that is "configured to receive a DNS request from a first device in the virtual network" and "*return a network address associated with a network route director*." Ex. C ('785 Patent) at 36:50-53 (emphasis added). Thus, claim 30 requires that the DNS server receive a DNS request and return a network address, where the network address is associated with a network route director. The network route director is not recited elsewhere in claim 30 or any claim that depends on claim 30, and claim 30 does not place any functional requirements on the network route director. The only requirement is that the network address must be "associated" with the network route director.

AA's proposed construction is wrong because it reads limitations into claim 30 that are not supported by the claims or specification. As to the language that reads "public addressable device," for example claim 38 recites a "route director," and is modified by claim 39 that further specifies "the route director is a *public* network route director." '785 Patent at 37:39-40. This language indicates that a network route director does not have to be a publicly addressable device and that

[1] Dkt. 67-2 at 2 (emphasis added).

there are other types of network route directors. As to the language that reads "configured to route encapsulated packets to and from entities located in a private network portion of a virtual network," again, there is nothing in the claims that require that the network route director be configured in such a manner. Rather, the claims only require that the DNS server return a network address that is associated with the network route director. This language in AA's proposed construction effectively re-writes the claim to require the network route director to route messages to the recited second device using the private network address and virtual network address returned by the DNS server, even though such a requirement is recited nowhere in claim 30.

VI. '469 PATENT

A. '469 Patent Background

U.S. Patent No. 7,324,469 ("'469 Patent") is titled "Satellite Distributed High Speed Internet Access" and was filed as Application No. 10/950,860 on September 27, 2004.

The '469 Patent discloses a satellite-based Internet "Hotspot" that enables wired and wireless Internet access. Ex. D ('469 Patent) at Abstract. The Hotspot uses a satellite dish to communicate with the Internet through data links and a router for handling communications and connecting to web-ready devices with browser software for Internet access at a location that experiences a relatively high volume of transient traffic. *Id*. at 1:47-56. The Hotspot includes a subscriber access unit that authenticates subscription accounts. *Id*. at 1:58-63. An exemplary Hotspot system is shown below in Figure 3 with annotations.

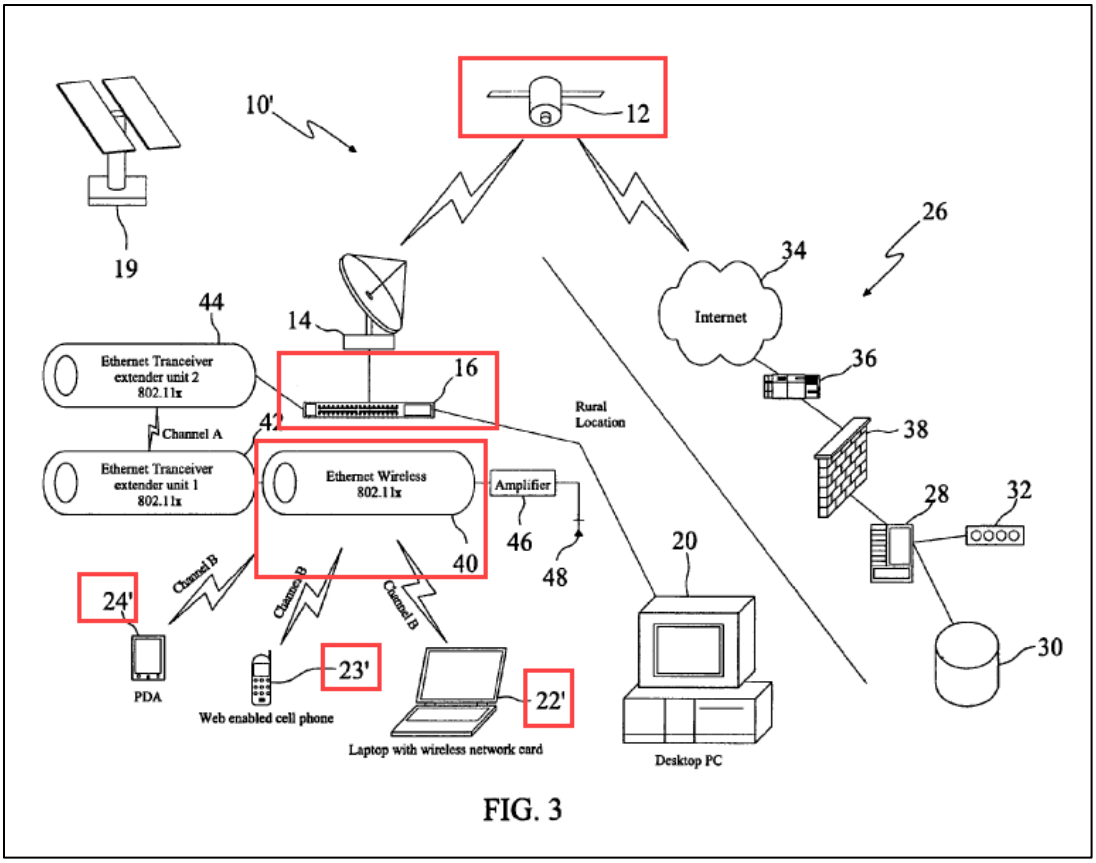


FIG. 3

B. Disputed Claim Terms

1. "a remote location experiencing a relatively high volume of transient traffic" ('469 Patent, Claim 24)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary	"a fixed remote location experiencing a relatively high volume of transient traffic"

The sole dispute between the parties for this claim term is whether a "remote location" must be a permanent "fixed" location. Because it need not be fixed, the Court should reject AA's proposed construction.

A review of claim 24 confirms that the language "fixed," nor any variation thereof, is not recited in that claim. Quite simply, there is nothing in the claim itself to justify re-writing it to recite "a fixed remote location" instead of simply a "remote location." *See supra*, *Interactive Gift Exp.*, 256 F.3d at 1331. The specification is no different. For example, the '469 Patent specification

describes that the invention, *i.e.*, a "Hotspot" as recited in claim 24 for example, is focused on "enabl[ing] wireless and hard-wired, satellite distributed Internet access for anyone with a PC or other web-ready device (wireless ready or cabled) and a valid credit card." Ex. D ('469 Patent) at 1:34-38. The Hotpots of the patent can be located virtually anywhere: "[t]he 'Hotspots' *can be located anywhere there is 120 volt electricity available or access to the sun for a solar panel and enough space to house the transceiver and mount a satellite dish*." *Id*. at 1:38-41 (emphasis added). The '469 Patent describes that its Hotspots are "best located in areas that experience high volume transient traffic," and provides a non-exhaustive list of potential locations including "rest areas, restaurants, truck stops, rural hotels, conference centers, motels and state park lodges." *Id*. at 1:41-44. Nowhere does the '469 Patent specification restrict its Hotspots from being located at non-fixed locations, such as trains, vehicles, and airplanes (as long as there is electricity available or solar access and sufficient space to house equipment). Indeed, the background of the '469 Patent explains that in the past, "[a]nyone in transmit, such as salesman, executive, truckers and private individuals ha[d] virtually no access while traveling, especially in rural areas." *Id.* at 1:21-30. The '469 Patent explains that "[h]otspots can be located anywhere." *Id.* at 1:38:46.

AA's proposed construction is wrong because it unnecessarily limits the application of the '469 Patent hotspot to fixed locations. There is nothing in claim 24 to justify limiting its scope to "fixed" remote locations, and there is certainly nothing in the specification that would justify importing limitations. *See Grantley Pat. Holdings, Ltd. v. Clear Channel Commc'ns, Inc.*, No. 9:06-CV-259, 2008 WL 5428186, at *4 ("Absent any clear disclaimer of claim scope, the court would not import limitations from the specification into the claims."). The fact that disclosed embodiments of the '469 Patent may show a fixed location (to the extent they disclose the nature of the location of the Hotspot) does not overcome the clear and unambiguous disclosures that the

only restrictions on the Hotspot recited in claim 24 is an electrical source and space to house necessary components. *See* Ex. D ('469 Patent) at 1:38-41. If a mobile remote location has an electrical source and sufficient space to house necessary components for the Hotspot, that is sufficient. *See GE Lighting Sols.,* 750 F.3d at 1309 ("[w]e do not read limitations from the specification into claims").

2. "a relatively high volume of transient traffic" ('469 Patent, Claim 24)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary. Not indefinite.	Indefinite as to "relatively high" and "transient"

The only dispute between the parties is whether the terms "relatively high" and "transient" are indefinite. Because their meaning is more than ascertained with reasonably certainty when read in light of intrinsic evidence, the Court should reject AA's proposed construction.

Claim 24 recites that the recited satellite dish, router, and subscriber access unit are "located in a remote location a experiencing *a relatively high volume of transient traffic*." Ex. D ('469 Patent) at 8:36-39. The '469 Patent specification provides multiple examples of locations that experience "high volume transient traffic," including "rest areas, restaurants, truck stops, rural hotels, conference centers, motels and state park lodges." *Id*. at 1:41-44; *see also id*. at 1:52-54 (installing a satellite dish and router in a rural location that "experiences a relatively high volume of transient traffic"), 3:2-4 (same), 3:6-8 (same), 3:52-55. A POSITA (and even a layman) would appreciate and readily understand that some of these exemplary locations have different volumes of traffic, and whether that traffic is transient or not.

Extrinsic sources confirm that the terms "relatively high" and "transient" have well-understood meanings that are consistent with the '469 Patent specification. For example, the dictionary.com entry for "relatively" is defined as "in a relative manner," or "with reference

(usually followed by to)" or "in proportion (usually followed by to),"[2] and the dictionary.com entry for "transient" is defined as "not lasting, enduring, or permanent; transitory."[3] In the context of the claims, this term can be simply understood as a relatively high or proportionally high (as opposed to low) volume of transitory traffic. The examples of remote locations provided in the specification provide specific examples where transitory traffic is proportionally high. An example of a location having a proportionally high volume of transitory traffic could be for example a rural truck stop that has hundreds of daily unique visitors.

AA's arguments should be rejected in part because it fails to consider the claims as a whole. *See Brookhill–Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1299 (Fed. Cir. 2003) ("While certain terms may be at the center of the claim construction debate, the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms.") (internal citations omitted). AA's approach to interpreting this limitation involves dissecting the entire phrase and focusing only on the specific words "relatively high" and "volume." This is problematic because one needs to evaluate surrounding claim language to understand its scope. For example, "transient" modifies "traffic," meaning the traffic must be transient (and non-transient traffic, for example a residential manager of a rural hotel, would not be included). Similarly, "relatively high" modifies "volume," where volume is further modified by transient traffic, meaning the volume of transient traffic must be relatively high. AA's attempt to construe the phrases "relatively high" and "transient" in a vacuum are improper and fail to properly consider the guidance provided by the specification for the entire phrase.

[2] Ex. I.
[3] Ex. J.

Further, a claim term reciting a relative degree of a thing (e.g., a relatively high volume of transient traffic) does not require specific threshold values or quantile values to be definite. As the Federal Circuit has noted, "[r]easonable certainty does not require absolute or mathematical precision." *BASF Corp.,* 875 F.3d at 1365. Indeed, examples provided in the specification of a relatively high volume of transient traffic can suffice—this is precisely what the '469 Patent specification does. *See, e.g., Resh, Inc. v. Robert Conrad, Inc. d/b/a SkimLite Manuf., et al.*, No. 5:22-cv-01427-EJD, 2023 WL 8482869, at *7-*8 (N.D. Cal. Dec. 7, 2023) (limitation reciting "relatively lightweight material" was not indefinite in view of the objective guidance provided in the specification, which described "a wide variety of materials and their relative qualities"); *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1349 (Fed. Cir. 2022) ("examples in the written description helped provide sufficient guidance to render the claims not invalid as indefinite."); *Actavis Lab'ys UT, Inc. v. UCB, Inc.*, No. 2:15-cv-1001-JRG-RSP, 2016 WL 3678987, at *9 (E.D. Tex. July 11, 2016) (declining to find 'relatively rigid' as indefinite, noting that 'the term 'relatively' clarifies that the claim is not referring to absolute rigidity'); *Guangdong Alison Hi-Tech Co. v. Int'l Trade Comm'n*, 936 F.3d 1353, 1363 (Fed. Cir. 2019) ("examples in the specification may be used to inform … without being directly construed into the claim"); *iLife Techs. Inc. v. Body Media, Inc.*, 90 F.Supp.3d 415, 441 (W.D. Pa. 2015) (finding claim term "relatively small" not indefinite and noting that the term "will vary across applications and environments" and that "[a] layperson could reach this understanding upon a careful reading of the patent's specification"). Thus, to the extent AA alleges that specific threshold or quantile values must be disclosed in the specification, it is wrong.

VII. ’582 PATENT

A. ’582 Patent Background

U.S. Patent No. 7,257,582 (“’582 Patent”) is titled “Load Balancing with Shared Data” and was filed as Application No. 10/375,893 on February 27, 2003.

The ’582 Patent discloses parallel processing and includes logically subdividing an input file into partitions that are distributed to processors that execute subtasks in parallel, including reading the partitions. Ex. E (’582 Patent) at Abstract. Upon executing a partition, a processor may obtain an unprocessed partition, including on a first-come/first-served basis, until subtask execution completes and output is combined. *Id*. at 1:61-2:14. The input file can be stored in a “directly attached storage” or on a “network attached storage.” *Id*. at 2:28-30. The parallel processing can involve various types of processes, including sort processes, statistical analysis processes, report generation processes, and database query processes. *Id*. at 2:30-33. The processors can be associated with their own respective computer or can be part of a multi-processor system. *Id*. at 2:33-37.

B. Disputed Claim Terms

1. “partition” (’582 Patent, Claim 1)

Plaintiffs’ Proposed Construction	Defendant’s Proposed Construction
Plain and ordinary meaning, no construction necessary	“well-defined part of the input file”

The claim term “partition” does not require construction and should be construed to have its ordinary and customary meaning, *i.e.*, a partition. AA’s proposed construction based on lexicography is wrong because (i) there is no lexicography and (ii) it unnecessarily limits the meaning of “partition” to an embodiment. Indeed, the patent uses partition in accordance with its

plain meaning, for example, "the input file **0** is logically partitioned into six partitions," and "output partitions are logically allocated on an output file." Ex. E ('582 Patent) at 5:34-35, 6:17-18.

Claim 1 recites in part "automatically determining file allocation and logically subdividing records of said input file into a plurality of *partitions*." Ex. E ('582 Patent) at 6:47-49. The patent provides examples of what a partition could be: "[a] logical partition *in this context* is a well-defined part of the input or output. *A very simple way to define a partition* … would be to define the partitions as *consecutive ranges on the input or output,* ranging from one relative byte address to another relative byte address or from one relative track address to another." *Id*. at 3:36-41. Moreover, the same paragraph states that "*other partition definitions* can be used with no impact on the rest of the embodiment." *Id*. at 3:46-47.

AA's proposed construction ignores this language and construes partition as limited to solely the "well-defined part of [solely] the input file," which is inconsistent with the intrinsic evidence stated above. Further, AA's proposed construction limits "partition" to a particular embodiment. This is made clear in the disclosure that it relies upon at 3:36-37, which states that, "*in this context*, [a logical partition] is a well-defined part of the input or output." Thus, "partition" should be construed as having its plain and ordinary meaning.

2. "description of all said partitions" ('582 Patent, Claim 1)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary	"statements giving a characteristic(s) of all of the well-defined parts of the input file for use in distributing the load without a special load process, wherein such statements are distinct from the input file itself"

The Court should adopt the plain and ordinary meaning of the term "description of all said partitions" and reject AA's proposal to construe the term as "statements giving a characteristic(s)

of all well-defined parts of the input file for use in distributing the load without a special load, wherein such statements are distinct from the input file itself."

Claim 1(b) recites "distributing descriptions of all of said partitions to each of a plurality of subtask processors." Ex. E ('582 Patent) at 6:50-51. The language that AA attempts to add to this term is nowhere in the claim or the specification. Moreover, there is nothing in this claim to justify construing this term. In combination with the above construction of the term "partition," "description of all said partitions" does not require construction beyond its plain and ordinary meaning.

AA's proposed construction improperly adds multiple limitations to this claim term. Specifically, the negative limitation "without a special load process" and the limitation "wherein such statements are distinct from the input file itself" are not supported by intrinsic evidence. Further, AA's reliance on a single layman dictionary definition for constructing "description" is improper given the technical nature of the '582 Patent and the technical relationship between the "descriptions" and the "partitions." *See Dow Chem. Co. v. Sumitomo Chem. Co., Ltd.*, 257 F.3d 1364, 1372-1373 (Fed. Cir. 2001) ("We have previously cautioned against the use of non-scientific dictionaries, 'lest dictionary definitions ... be converted into technical terms of art having legal, not linguistic significance.'") (citation omitted).

AA relies on the file history to import the limitation "without a special load process." However, a closer review of the '582 Patent file history confirms that insertion of this limitation into claim 1 is not supported. During prosecution, the Applicant distinguished prior art, in part, based on the "first-come/first-served basis" limitation. The Applicant also added clarification to the "distribution" limitation, shown below with annotations:

> The amended claims, refer to a distribution of a description of the work to be done. The sharing process can use such a description to distribute the load without a special load process.

Ex. K ('582 Patent File History, March 6, 2007 Applicant Response) at 7. While the text of the file history removes the requirement for a centralized load process that uses load information to make scheduling decisions, it does not preclude centralized coordination or the use of load information in making scheduling decisions—it simply makes this an option ("can use") as opposed to a hard requirement. This is made clear in the amendment above, which states that the "the sharing process *can use* such a description to distribute the load without a special load process." *Id.*; *see also Luminara Worldwide, LLC v. Liown Elecs. Co. Ltd.*, 814 F.3d 1343, 1353 (Fed. Cir. 2016) (finding no reason to depart from plain and ordinary meaning where specification described feature as optional and no evidence in prosecution history that is to the contrary).

AA's proposed construction is also wrong because there is nothing to support making the "description" "distinct from the input file itself." There is nothing in the claims that require the description to either be a part of the input file, or not to be a part of the input file. There is further no requirement that the descriptions are not part of a partition, for example. The claims merely require that "descriptions" of the partitions are distributed to the subtask processors. AA's reliance on 3:52-59 does not otherwise lead to a different conclusion. Indeed, that disclosure relates to determination of a "logical partition" and that the "reading" of an input file is generally reserved to a subtask that processes reads the partition allocated to the subtask. Therefore, this disclosure indicates that the patent does not place restrictions on the nature of the term, requiring the term to maintain its plain and ordinary meaning.

3. "simultaneously executing at least a respective one of the subtasks of the computer-executable process in each of at least some of said processors on a respective one of the partitions" ('582 Patent, Claim 1)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary. Not indefinite	Indefinite

The parties dispute whether the claim term "simultaneously executing at least a respective one of the subtasks of the computer-executable process in each of at least some of said processors on a respective one of the partitions" is indefinite. It is not.

The preamble of claim 1 of the '582 Patent recites, in part, a method of "effecting" a "computer-executable process comprised of *a plurality of subtasks*." Ex. E ('582 Patent) at 6:44-46 (emphasis added). Claim 1 further recites "distributing descriptions of all of said partitions to each of *a plurality of subtask processors*" and "simultaneously executing *at least a respective one of the subtasks* of the computer-executable process *in each of at least some of said processors* on a respective one of the partitions." *Id*. at 6:50-55. For the "simultaneously …" limitation recited in step (c), the language "the subtasks" refers to the "a plurality of subtasks" recited in the preamble, and the language "said processors" refers to the "plurality of subtask processors" recited in step (b) of claim 1. Thus, claim 1 can be understood to require at least two subtasks and at least two subtask processors. *See SIMO Holdings Inc. v. Hong Kong uCloudlink Network Tech. Ltd.*, 983 F.3d 1367, 1377 (Fed. Cir. 2021) ("'[A] plurality of' requires two or more.").

With this understanding in mind, the disputed term "simultaneously executing at least a respective one of the subtasks of the computer-executable process in each of at least some of said processors on a respective one of the partitions" has a straightforward and well-understood meaning. This term requires executing, *on "each" of the subtask processors*, at least one subtask. In other words, each subtask processor has at least one subtask being executed, with that execution

of two or more subtasks on two or more subtask processors occurring "simultaneously." The language "at least some of said processors" does not change the meaning of this term because a "plurality" of processors means there can be two *or more* processors, and "some" includes at least two, but possibly more, processors. This meaning is consistent with the '582 Patent specifications description of performing processes in parallel (Ex. E ('582 Patent) at 1:29-54) or simultaneously (*id*. at 5:54-65). AA's entire argument is based on its incorrect interpretation that the claim only requires one subtask to execute. Because this interpretation is wrong and inconsistent with the claim language and specification, it should be rejected.

4. "on a first-come/first-served basis" ('582 Patent, Claim 1)

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
Plain and ordinary meaning, no construction necessary.	"selecting the earliest unprocessed partition for execution without the use of a control process that uses load information for such selection"[4]

This is a limitation that requires no clarification or further construction. Indeed, AA's attempt to construe "on a first-come/first-served basis" as "selecting the earliest unprocessed partition for execution without the use of a control process that uses load information for such selection" would add unnecessary confusion to a term that is well-understood. Further, there is insufficient intrinsic evidence to justify AA's proposed construction.

[4] In Exhibit B to the parties' P.L.R. 4-3 disclosures, AA offered only the following proposed construction for this term: "selecting the earliest unprocessed partition for execution without the use of a control process that uses load information for such selection." However, AA also submitted a declaration that would further limit this term to mean as follows: "[a] POSITA would have also understood that whether a partition is the 'earliest' unprocessed partition would have been determined by the ordering of the partitions determined in step (a) of claim 1." This language is not in AA's P.L.R. 4-3 disclosures, and should thus be rejected. Out of an abundance of caution, IV will address this non-disclosed language (introduced for the first time in AA's declaration).

Step (d) of claim 1 recites "thereafter repeating step (c) in at least some of the subtask processors each with another unprocessed partition on a first-come/first-served basis." Ex. E ('582 Patent) at 6:59-61. Step (e) recites "generating at least one output combining all of the subtask outputs and reflecting the processing of all of said subtasks." *Id.* at 6:62-64. Thus, to the extent AA alleges that the "selecting" must be determined by the information shared in step (a), there is thus no basis in the claims that compels that this conclusion, and there is no evidence.

For its proposed construction, AA relies on the '582 Patent file history, in particular the "four-way stop" example. This example, along with the context in which the statement was made, is provided below with annotations.

> The primary difference between the instant invention and the processes disclosed in US 5,603,028 of Kitsuregawa and 5,357,632 of Pian is that these systems rely on a special control process that uses load information to distribute the load between processors that share the load. With the instant invention as defined in the claims there is no such special process. The prior art's load information is not created with the process of the instant invention. Instead, the load sharing is done as a byproduct of the fact that the load-sharing process take parts of the load on a first-come/first-served basis.
>
> A comparison would be to a road intersection where, according to the prior art, there is a traffic light that determines who can go when. The instant invention is more like such an intersection with a four-way stop so that the individual drivers determine who can go and when.
>
> This is a major improvement since in addition to eliminating the control process it also eliminates the need to collect and maintain load information, which it is very difficult to do and almost impossible to define so as to anticipate all possible processors that might execute the subtasks.

The "four-way stop" example provided in the file history is illustrative of an approach where processes make decisions based on real-time information and not simply "special" control processes, which is confirmed by the plain language that the Applicant used to describe this example. In this manner, load sharing is done as a "by" of the first-come/first-served basis and helps in eliminating the need to "collect and maintain load information," as described in the passage above.

Additionally, AA's proposed construction is inconsistent with the multiple descriptions in the '582 Patent specification that allow for the inclusion of an internal or external scheduler that considers dependencies:

> The various parts of the Equivalent Process 101 are depicted here as consecutive steps in one procedure but alternative embodiments could replace them by dependent 15 tasks controlled by a job scheduler. In this case, the wait step would be replaced by a dependency of the Merge step 105 on the completion of Sub Task 103, Sub Task 201 and Sub Task 202.

Ex. E ('582 Patent) at 3:13-19.

> When the split step terminates, the various Sub Tasks (in this case: 103, 202.203) can be activated. This activation can 65 be initiated by the split step 102 itself or by an external scheduler.

Id. at 3:64-67.

Therefore, the limitation "on a first-come/ first-served basis" cannot solely mean "selecting the earliest unprocessed partition for execution without the use of a control process that uses load information for such selection."

VIII. CONCLUSION

For the reasons above, IV's requests that the Court adopt its proposed constructions.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing instrument was served or delivered electronically to all counsel of record on this 26th day of August, 2025, via the Court's CM/ECF system.

/s/ Jonathan K. Waldrop
Jonathan K. Waldrop